

# jpl → W6VIO CALLING

MAIL STOP-  
Jet Propulsion Laboratory  
W6VIO Calling M/S 233-208  
Attn: Eileen McKinney-Editor  
4800 Oak Grove Drive  
Pasadena, California 91109

PRESIDENT: JOHN McKINNEY N6AVW X-6610  
VICE PRES: ART ZYGIELBAUM WA6SAL  
SECRETARY: JOHN EARNEST N6CTT  
TREASURER: JOHN REPAR WA6LWD

Director at Large: STAN SANDER N6MP  
Trustee: Jay Holladay W6EJJ  
Emergency Comm: Merv MacMedan N6NO  
Editor: Eileen McKinney KA6DGV

Club Meetings: 2nd Wed of month  
12 Noon in 238-543. All welcome

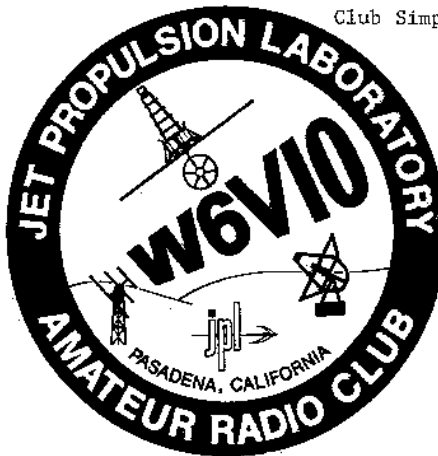
Board Meetings: 4th Wed of month  
12 Noon in 238-543 All welcome

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Club Sponsored OPEN Repeater: W6VIO/R  
222.44 in/224.04 out. Has user operated link  
to WR6AZN on Table Mountain. Closed Repeater  
Member Only with autopatch. 222.48in224.08out

NETS: Amateur Radio News: Tues 8PM on W6VIO/R  
OSCAR Net: Wed 8PM W6VIO/R

Club Simplex Frequency: 223.4



### President's Message

December has arrived and the JPL ARC is winding down 1982 activities and is making plans for 1983. It is important that members attend the next two club meetings (December 8 and January 12) to become involved in the transitional phase. First, the Nominating Committee's proposed slate of 1983 officers will be presented to the membership at the December meeting. Additional nominations can be made from the floor at that time and ballots will be distributed to the membership for those positions as appropriate. Second, the proposed 1983 budget (which was endorsed by the Board of Director's in the November meeting) will be presented at the January general membership meeting for approval. In addition, the new Club officers will be installed at the January meeting.

I hope we have a large turnout for these meetings.  
(John, N6AVW)

REMEMBER WEDNESDAY'S MEETING - SEE PAGE 3 FOR MORE DETAILS! ALSO REMEMBER THAT ELECTIONS WILL BE HELD AT THIS MEETING SO IT IS VITAL THAT YOU ATTEND!

WEDNESDAY 8 DECEMBER  
12 NOON BLDG 238-543

GET INVOLVED!

AND VOTE!



HAPPY HOLIDAYS

## FROM THE EDITOR'S DESK

CHRISTMAS PRESENTS - BAH HUMBUG!

Last night John went off to do his Christmas shopping and came home with something that rings, rattles and groans when I shake the package. I live in terror each year when the holidays come. What will it be this year? Last year he bought me a "grow your own herb garden". It was the height of luxury (for the herbs). Came with it's own sanitized dirt that was specially formulated to grow ugly little green sprouts. The best part was the "personalized" bottle of bug spray.

The year before it was "moose slippers". They were unique. You could smell them before they walked into the room. I thought moose was an endangered species - but if those slippers were any indication of what moose are like - they should all be deliberately eliminated.

I've gotten gifts for the past 15 years that would choke a cheeta. They've run the gamut from a flash for John's camera to a super dooper vegetable slicer guaranteed to slice tomatoes so thin that you could see through them. Ha! I put the tomato in the super dooper gadget and the seeds shot towards the living room while the tomato flew into the furnace grate. Now what simpleton would want to see through his sliced tomatoes anyway?

The worse yet though was the year I got the diamond watch. A girl on my bowling team also got a diamond watch that year. We both squealed in delight. "Let me see yours", I said. She raised up her sweater sleeve and there was a watch smothered in 1/2 carat diamonds. "Let's see yours", she babbled. "Oh I left mine home in the safe", I said. Now I ask you how could I raise up my sleeve and show her Mickey Mouse with a chip in his belly button!  
(Eileen KA6DGV)

FACILITIES????

We have an enviable Club facility!!! But it is in sad need of some TLC.

Now is a very opportune time for you to adopt one very small but significant aspect of the total facility and give just that one area some Tender Loving Care!

Due to the necessary overhaul of the Lab's water tanks, all of the tank mounted antennas have been dismounted. The TH 6DXX beam remains.

The KT-34XA beam on the telephone pole does not rotate as beams naturally should. We suspect that the rotation sleeve on the mast needs some grease. The 40-meter beam is not loading properly on 40-meters.

The Slow Scan station has a color camera and the latest mods in the Robot 400, but the camera needs some mechanical TLC. We are still trying to make the Oscar station operational...Phase III launches soon.

As you can see, there are a myriad of various size tasks that must be done to keep the station in a ready state. Why not adopt a phase, position, antenna, or such and let it be known that you will keep just that one area up to snuff!!

Since Jack Patzold, our Facilities Manager, is and will be spending most of the next two months off-lab, please contact me at 6726 and adopt something or some area.

Fear not, I have plenty of ideas and advice if you need some to get started. I am also pretty familiar with the current overall strategy and plan for the facility; however, fear not again, for most of it is quite flexible.

I have always felt that the Club should provide room for individuals to operate within the overall framework of the Club. Let's get lots of people to be a huge team on the facility and put it back in top-top shape! (Jim WA6MYJ)



JPL ARC BOARD MEETING MINUTES - NOVEMBER 24, 1982 - Present were: B. Beaudry M. MacMedan\*  
J. Earnest\* J. McKinney\*  
J. Holladay\* S. Weaver  
J. Lumsden A. Zygielbaum\*

1. The meeting started 25 minutes late due to lack of a quorum.
2. The minutes were read and approved.
3. Correspondence received was discussed: "thank you" notes for Shuttle Audio, and a possible tele-conference with repeaters.
4. The proposed 1983 JPL ARC budget was presented by J. McKinney and discussed in detail. One minor change was proposed and the budget approved for presentation to the general club for final approval at the January club meeting.
5. After discussion by J. Lumsden and J. Holladay it was decided to proceed with shuttle audio for next shuttle launch pending information to be acquired by J. Holladay.
6. M. MacMedan presented an inventory of equipment at the Bldg. 171 Command Center, both government and non-government (club owned) equipment. It was proposed to surplus the unwanted government equipment and to dispose of the unwanted club equipment by sale to members. This will probably appear in the Club Newsletter. (Continued on Page 3).



**BEWARE THE GROUND CONNECTION!**

Recently, I learned the hard way not to trust everything you read in equipment instruction manuals. In my Clegg FM-76 220 MHz mobile unit's manual, the manufacturer recommends connecting the rig directly across the battery terminals, or as close thereto as possible, to reduce noise on the power line to the rig. That's fine for the purpose intended, but it introduced a safety problem that he obviously didn't envision. Let me tell you what happened.

Most cars are wired so that the negative battery lead is connected to the car body through a short, heavy cable to a point on or very near the starter motor. Since the starter motor is the biggest hog of current (taking several hundred amps while cranking the engine) it is imperative that the voltage drop should be minimal on this circuit. On my car, the bolt attaching that lead to the body loosened and one morning when I tried to start the car, it cranked slowly and erratically. I traced the problem to the loose bolt, tightened it, and the car started fine afterwards. But when I tried to use the radio, it seemed sick. Output power was down, ignition noise came through the receiver and the squelch settings didn't work right.

Troubleshooting the radio (with help from Mike Santana, WB6TEB) revealed four burned-out ground traces on the printed circuit boards and charred debris around them. Amazingly, bridging the "opens" with short wires and re-soldering was all that was needed to restore the radio to full performance. But ... what had caused this disastrous condition?

A little noodle work revealed that since the radio was grounded through its case and the antenna on the car, it was providing the ground return path for the starter motor (300 amps!) when the bolt loosened at the end of the heavy battery cable. Why? Because the manufacturer **ONLY FUSED THE RIG'S POSITIVE POWER LEAD!** Since I had connected the rig's negative as well as positive lead directly at the battery, the radio provided a return for the battery to the car body, and the excessive current blew out the circuit board. That's an expensive fuse!

Three lessons learned: 1. Always fuse **BOTH** power lines to your mobile gear; 2. Don't connect your rig's **NEGATIVE** power lead to the battery - go to the car body instead, **LIKE ALL THE OTHER ACCESSORIES** on your car; and, 3. Don't believe everything in the manual.

Postscript: After this happened, I bought a new ICOM IC-730 for 12 volt portable use in my car and boat. I ripped open the box and immediately looked at the power cable. It had fuses in **BOTH** lines!  
(N6NO)

Interest 

HAMS OF NOTE & NOTABLE HAMS (Excerpted from Mt. Wilson Repeater Assoc. Newsletter Oct) CONTINUED:

Vern Orr-Secretary of Air Force-Pentagon WA6IOG  
Stu Gilliam -Comedian-K16M  
Johnny Grant-Radio Personality-Star Hollywood Blvd.  
WB6MJV

Marlon Brando-Actor-F08GQ  
Alvino Ray-Entertainer-W6UK  
Barry Goldwater-Senator-Arizona-K7UGA  
Andy Griffith-Actor-WA7WYN  
Donny Osmond-Entertainer-KA7EVD  
Emery Gordy-Member of John Denver's Group-W4WRO  
Owen Garriott-Astronaut-W5LFL  
Joe Walsh-Entertainer-"The Eagles"-WB4ACU  
Tim O'Connor-Actor-WD6BYT  
Lloyd Boucher-Actor-N6CKF  
Roy Neal-NBC News-K6DUE  
Burl Ives-Entertainer-KA6HVK  
Howard Hughes-Silent Key-5CY

**ANNUAL TUNEUP CLINIC**

We are pleased to announce that Mike Santana, WB6TEB, has agreed to once again hold an annual JPL Amateur Radio Club VHF/UHF tune-up clinic next month. This makes the sixth year in a row that Mike has helped our members maintain the top-notch quality of our signals.

Remember that crystals age and vibration and use may alter perfectly aligned pot settings. At least once a year you should have your mobile or hand-held rig checked. Mike will have professional equipment to test:

- Transmitter frequencies
- Transmitter deviation (mike and touch-tones)
- Transmitter power output
- Receiver frequencies
- Receiver discriminator settings/alignment
- Receiver sensitivity

A spectrum analyzer will be available to check for spurious responses and outputs.

Please be sure you bring your frequency list for crystal-controlled equipment, and the manual showing the location of the trimmers and adjustments. You will be given the opportunity to perform minor repairs, if necessary, and have your unit re-checked before leaving. As usual, free coffee and donuts will be provided.

While we can always hear when our receivers are not performing the best, we are seldom aware of transmitter problems until someone points it out to us. Many repeater users have too much or too little deviation or are somewhat off frequency. In many cases, you can "get by" as long as you are in a strong signal area, but the moment you try to use the repeater in a marginal situation, the deficiencies show up as "squelching out on modulation peaks" or "distorted audio" or the inability to perform one touch-tone function on the autopatch after having (marginally) performed another. You owe it to yourself to check your signal, and here's the opportunity to make use of some \$25,000 of test equipment and Mike's invaluable expertise that are being made available to you, free. **PLAN ON BRINGING YOUR GEAR ON A WEEKEND IN MID-JANUARY, THE EXACT DATE TO APPEAR IN THE JANUARY ISSUE!**  
(N6NO)

HOT DOG SALE - AT THE NOVEMBERFEST - JPL ARC SUPPORT

This year, the Club once again operated the Hog Dog Stand at the ERC Novemberfest Picnic. It was a beautiful day, we all had fun, and yes, we even managed to make a profit of \$125 for the Club coffers. Competition from fellow ERC Clubs with hamburgers and chili, plus a smaller than usual picnic attendance, cut into our profits somewhat this time. (To our benefit, the other clubs missed a good bit by running out of food early, and by mid-afternoon, we had a captive customer audience.) Our profit was additionally enhanced by the dutiful willingness (?) of the Club President and Editor to subsist on surplus hot dogs for the next three months - that's real team spirit!

Many thanks go to our volunteers: Eileen and John McKinney (N6AVW & KA6DCV), Eileen's parents the ever-willing Blanche and Frank Kenworthy (third year in a row - 3 cheers for the Kenworthys), Stan Sander (N6MP), Kerry Erickson (N6DSG), and especially Bruce Beaudry WD6HEZ who besides getting the beer for the rest of us, again took on the fun job of loading, unloading, and driving the JPL truck. (See-Bruce really didn't mean what he said after the last picnic.) Mike Stewart, WA6VQI

*Many thanks to Mike who did all of the above plus everything else including getting all the food.*

FEATURED HAMS OF THE MONTH COLUMN

*The questionnaires have been rolling in and I'm really excited about the response. I've been publishing the response as I receive it and so if you're name has not appeared yet - don't despair - I didn't lose it - it's coming in the near future. And if you haven't sent in your questionnaire yet - please please please send it in. If you need another copy contact John X6610. Thanks a million and a half. Eileen*

**JOHN REPAR** - John (WA6LWD) our current Treasurer, holds an Advanced License and has been a Ham for 19 years. He was born in Barbenton, Ohio and grew up in Ohio. He has two sons and one daughter and will be a grandpa in Jan. of 83. John operates on 15, 10 and some 220. He is also a member of the Diamond Bar ARC. His hobbies include: Aerobatic flying and astronomy. John first visited JPL in 1951 where he made expulsion bladders for hydrazine fuel which were used on Mariner 69, Pioneers 10 & 11, Venus-Mercury, Viking and both Voyagers. He joined JPL in 1977 as Materials Engineer in 354. He's a retired Major in the USMC after serving in WW II and Korea. He flew 84 missions in Korea.

**GEORGE HANSEN** - George (NJ6I) was born and grew up in Los Angeles. He's been married for 33 years and has 5 children (3 girls and 2 boys) and 2 grandsons. He's been a Ham for 3 1/2 years and operates on 15, 20, 40' cw and 220 FM. He's a member of the SCSM. His hobbies include: hiking, photography and homebrewing (hangear he claims). He was in the U.S. Navy during World War II and then attended UCLA for Engineering. Except for 1956-58 he's been at the Lab since 1949. Now he's isolated at the Foothill Installation. He's been doing oceanographic instrumentation systems for the past 7 years. He was also the former KD6FL and KA6DBM. George holds an Extra Class License.

**LARRY KINNEY** - Larry who holds an Advanced Class License (WA6HOB) has been a Ham for over 10 years. He was born in Joplin, Mo. and grew up in Riverton, Kansas. He operates on all bands and is a member of the TriCounty ARC, North Alta Loma RC. He's the Operations Officer for the Pomona Office of Emergency Services and he belongs to the L.A. County RACES and the Edgewood Amateur Radio Club. He's single and his hobbies include: collecting coins and plates, and he enjoys participating in public service activities (assisting with communications). Larry is also a former U.S. Navy man. He enlisted from Kansas and remained on active duty for 20 years spending two years respectively in Japan and the Philippines. He works swing shift at CalTech and he is a life member of the ARRL.

**BOB POLANSKY** - Bob (N6ET) holds an Extra Class License and has been a ham for 32 years. He also used his cw keyer as a teething ring. He is the former W6JKR. Bob was born in Chicago, Illinois and was raised in Chicago and South Pasadena. He operates on 80, 40, 20, 15, 10 meters and 220 MHz. His ham awards include: DXCC Honor Roll (Mixed mode), 5BDXCC #47, 5BWAS #53 (Notice they total 100!), WAS, WAZ (mixed mode), WAC, and 30 WPM CW Proficiency Award. He and his wife Dory (who works at the JPL Credit Union) have two sons Robbie and Michael. His other hobbies include backpacking, hiking, skiing and fishing. Bob is also working toward DXCC Phone Honor Roll (1 country and 9 QSL's yet needed) and he's working toward WAZ (phone mode) (All worked & 1 QSL yet needed). He loves chasing DX and enjoys some participation in contests. 150 countries worked and confirmed on 75/80 meters.

**MARGARET A. GAUTHIER** - Margaret (WA6OUD) holds a Technician Class License and has been a ham for 7 years. Her aliases include XE1OUD, XE2OUD and XE0OUD. Margaret was born in Long Beach, California and grew up in South Gate. She operates on 2 meters and 220 MHz and also belongs to the Mt. Baldy Repeater Group and Colegas y Amigos. Margaret is married to husband Mike K6ICS and has two children. Her hobbies include oil painting, photography and travel.

**CONNIE MORRIS** - Connie (KA6JAM) holds a Technician Class License and has been a ham for 2 3/4 years. She was born in Pottsville, Pennsylvania and grew up in the United States and in Mexico. She's married to George (W6ABW) and she operates on 2 meters and 220. She holds the position of Treasurer in the Crescenta Valley Radio Club and her other hobbies include playing bridge and reading.

Editor's Note: This alphabetical listing is courtesy of the hard work of Bob Layne W6LTC. Thank you Bob.

JPL AMATEUR RADIO CLUB 1982

8-23-82

N2YQ	BROKL, STAN	KE6FE	AUMANN, HARTMUT	WA6IUR	ENMARK, HARRY
AJ3A	GRIFFEN, MICHAEL	KE6GB	WIGGINS, CECIL	WA6JKM	WEAKS, KENT
WA3NPK	HOLMES, DWIGHT	KE6SU	LUERS, EDWARD	WA6KNZ	ROSS, PAUL
HK4CVV/W6	MACMEDAN, ELVIA	KG6Y	MATHISON, RICHARD	WA6KPW	LONGTHORNE, JAMES
AE6S	GOSLINE, BOB	KO6D	GOODWIN, PAUL	WA6LIG	DOOGE, TOM
K6AOC	FONG, MARSHALL	N6AVW	MCKINNEY, JOHN	WA6LWD	REPAR, JOHN
K6BLG	BATHKER, DAN	N6BBP	MASON, PETER	WA6MYJ	LUMSDEN, JIM
K6CV	BASTOW, J.G.	N6BCI	KOVATCH, JASON	WA6NVA	WOOD, GORDON
K6CYY	AKERS, ROBERT	N6BH	HARTLEY, BOOTH	WA6OPB	PIROUMIAN, MAURICE
K6DNS	MUSHAGIAN, WALTER	N6BTL	STRICKLAND, RILEY	WA6OUD	GAUTHIER, MARGARET
K6ELH	EDMONDS, ROBERT	N6CI	WEBER, WILLIAM	WA6PBM	COWLEY, JOHN
K6GHJ	BERRY, GLENN	N6CTT	EARNEST, JOHN	WA6PEA	DIEM, WALT
K6GPK	APEL, WARREN	N6DSG	ERICKSON, KERRY	WA6QZY	CARPENTER, BILL
K6ICS	GAUTHIER, MICHAEL	N6DSP	VOLKMER, KENT	WA6RUQ	RAFFERTY, MICHAEL
K6JCB	MACDORAN, PETER	N6ET	POLANSKY, BOB	WA6SAL	ZYGIELBAUM, ART
K6KID	FESSINGER, HERB	N6FHM	GOLDMAN, ALFRFED	WA6SPV	SUTTON, DAVID
K6PGX	CHALFIN, NORM	N6FTB	SATO, TAKESHI	WA6SQF	LAWSON, DON
K6SVP	PIETY, RICHARD	N6GGJ	WAGNER, DAVID	WA6SVY	PICKENS, R.A.
K6TOS	YANOW, GIL	N6GNS	NORTHERN, DOUG	WA6TPT	CUNNINGHAM, GENE
KA6BKX	BURKE, GENE	N6HAU	MALM, DICK	WA6TPW	PLOSZAJ, RON
KA6CBI	JENKINS, GEORGE (BUD)	N6HBA	GOODWIN, KATHLEEN	WA6ULW	GOLDBERG, JACK
KA6CTX	LITTY, E.C.	N6MP	SANDER, STAN	WA6VQI	STEWART, JAMES (MIKE)
KA6DAN	MCKINNEY, RICHARD	N6NO	MACMEDAN, MERV	WA6VYH	DENNING, RICHARD
KA6DBO	DOUGLASS, LIN	N6OE	BROWN, STEPHEN	WA6YIG	ENDSLEY, E. (RICK)
6DEX	VAN ALLEN, RICHARD	N6UK	WALSH, JOHN	WB6CIA	SCHAEFER, MARK
KA6DGP	BURDICK, GARY	N6YM	WEST, RALPH	WB6CUB	TUCCI, MICHAEL
KA6DGV	MCKINNEY, EILEEN	ND6X	SUTTON, JIM	WB6DLK	JOHANSEN, CARL
KA6DOC	VON ROOS, OLDWIG	NJ6J	BEDNARCZYK, STEVE	WB6DPE	SIMMONS, CLINTON
KA6HIF	STEWART, GLENN	NJ6I	HANSEN, GEORGE	WB6DRH	CRAWFORD, GORDON
KA6HLW	FRANCK, CARL	W6ABW	MORRIS, GEORGE	WB6EMO	WEAVER, SAM
KA6HPE	WALSH, JOE	W6EJJ	HOLLADAY, JAY	WB6FXJ	WOOD, WILLIAM
KA6HVV	KUSHNER, LEN	W6GC	EMIG, IRV	WB6GCI	ATKISSON, JAMES
KA6IBF	KESTERSON, JIM	W6HCD	WILLIAMS, NASH	WB6GXS	CANZANO, GENE
KA6JAM	MORRIS, CONNIE	W6KWH	GRUMM, RICHARD	WB6HIE	FUHRMAN, JAMES
KA6JEX	LAWSON, BETTY	W6LEI	TUCKER, TOM	WB6INZ	SCHNEIDER, HORST
KA6MHE	PRESLEY, CHUCK	W6LFT	MORECROFT, JOHN	WB6IZR	SHEBEL, DENNIS
KA6MHF	ERICKSON, JIM	W6LTC	LAYNE, BOB	WB6JQY	IRVINE, DALE
KA6MJG	STEWART, EVELYN	W6LZP	STAPLETON, BRIAN	WB6LKS	MARTINEZ, JOHN
KA6RBK	GARDNER, ROB	W6MEE	HULTBERG, JOHN	WB6MBI	HUMPHREY, JERRY
KA6SMO	BILLITTI, J.W.	W6OJA	YOUNGER, HERB	WB6PTX	HALL, JUSTIN
KA6SMP	BAIRD, KATHLEEN	W6ORG	OHARA, TOM	WB6RUP	RAFFERTY, JAMES
KA6SMQ	ANGLIN, RICHARD	W6PVR	WEEMS, WES	WB6TEB	SANTANA, MIKE
KA6SMR	WATKINS, JOHN	W6RNO	HUMPHREY, VINCE	WB6TXG	PATZOLD, JACK
KA6SMV	WILSON, JAMES	W6TUZ	ZINONE, RON	WB6VWH	JOHNSON, SID
KA6SRP	SCHMEITINK, C.A.	W6VPN	ROSS, WALTER	WB6WRX	KUCHLER, ALBERT
KA6SRR	LEE, THOMPSON	W6WLH	BAUMGARTNER, W.S.	WB6WXX	LYMAN, PETE
KA6SRT	BURCHAM, DONALD	W6WXL	HAWKES, JERRY	WB6EWN	QUINN, REX
KA6SRU	ENDARA, JOSE	W6YPG	RAINES, MERLIN	WD6FLY	STEVENS, GARY
KA6SUG	YAMANE, NOB	WA6BZB	WIRTH, VINCE	WD6HEZ	BEAUDRY, BRUCE
KA6TJT	HOWARD, EARL	WA6CWR	STAPLETON, MARY	W8FDG	RAUCH, LARRY
KA6UKR	KEPPEL, HENK	WA6EPY	CUTTING, ELLIOTT	WA8VGK	FLEETER, RICK
KB6NT	JOHNSON, RICHARD	WA6HOB	KINNEY, LAURENCE	WD8LUS	FARROW, RICHARD
KE6ET	SCHOU, PAUL				

CLUB EMERGENCY CAPABILITIES SURVEY

With hearty thanks to those of you that responded to our questionnaire on emergency communication capabilities last spring, here is the first shot at cataloging the information. There is a great deal more information available than we could present here, and it is being put into a data base for future retrieval in a variety of ways. If you haven't yet responded, and would like to be included in the data base, there's still time to be added. Ask the club Secretary, John Earnest, N6CTT for a copy of the questionnaire and send it posthaste to: Merv MacMedan, N6NO, 233-208. The objective of this survey is to produce a catalog of capabilities that can be referred to in an emergency to see who can talk to who, and what teams could be put together for deployment.

In the meantime, the following respondents have demonstrated their concern for emergency communications; we are including some of their capabilities:

CALL	LAST NAME, FIRST	CLASS	LABMAIL	LABTEL	---CAPABILITIES BY BANDS---										
					160	80	40	20	15	10	6	2	220	450	
W6ABW	MORRIS, George	EXT	238-420	7066	CS	CS	CS	CS	CS	CS		F	F		
N6BH	HARTLEY, Booth	EXT	201-209	2459								F	F		
N6BTL	STRICKLAND, Riley	GEN	238-528	3957								F	F	F	
N6CI	WEBER, Bill	EXT	238-420	3845			CS	CS	CS	CS					
KO6D	GOODWIN, Paul	EXT	161-228	4820			CS	CS	CS			F	F		
K6DNS	MUSHAGIAN, Walt	GEN	238-420	3036	CS	CS	CS	CS	CS	CS					
N6DSG	ERICKSON, Kerry	TEC	233-208	3567								F	F		
N6ET	POLANSKY, Bob	EXT	264-443	4940		CS	CS	CS	CS	CS			F		
N6GGJ	WAGNER, David	TEC	264-119	7840									F		
KA6IBF	KESTERSON, Jim	TEC	126-300	4023								CSF	F		
K6ICS	GAUTHIER, Mike	ADV	T-1180	2126			S	S	S	S		F	F		
WA6IUR	ENMARK, Harry	ADV	11-116	4187		S	S	S	S	S		AF			
NJ6J	BEDNARCZYK, Steve	EXT	138-205	7747		CS	CS	CS	CS	CS		F	F		
WA6LWD	REPAR, John	ADV	157-507	7261		CS	CS	CS	CS	CS		F	F	CS	
W6LZP	STAPLETON, Brian	EXT	OFF-LAB	-	←---ACS---→								F		
N6MP	SANDER, Stan	EXT	183-601	2625	←---Rig only---→								F		
N6NO	MACMEDAN, Merv	EXT	233-208	7004		CS	CS	CS	CS				F		
N6OE	BROWN, Steve	EXT	161-228	2977								F			
W6OJA	YOUNGER, Herb	ADV	200-122	4548		S	S	S	S	S			F		
WA6PEA	DIEM, WALT	ADV	233-307	6422								SF	F	F	
KA6RBK	GARDNER, Rob	NOV	T-1166	6085		C	C	C	C	C					
WA6SQF	LAWSON, Don	ADV	233-119	5609	AS	AS	AS	AS	AS	AS		ASF	F		
WB6TXG	PATZOLD, Jack	TEC	233-103	4926		CS	CS	CS	CS	CS			F		
N6UK	WALSH, John	EXT	125-138	3303	←---All except A---→						←All modes---→				
WA8VGK	FLEEZER, Rick	ADV	67-201	2277		CS	CS	CS	CS						
W6WXL	HAWKES, Jerry	ADV	150	2542	S	S	S	S	S	S		F			
N2YQ	BROKL, Stan	EXT	238-420	7403	CS	CS	CS	CS	CS	CS		F	F		

Key to modes:

All=SSIV, RTTY, plus A,C,S,F.

A=AM; C=CW; S=SSB; F=FM.